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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LAZARO, DAVID R

ART UNIT PAPER NUMBER

2155

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/635,280

Applicant(s)

WISCHINSKI, RAINER H.

Examiner

David Lazaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 19-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/29/05
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the RCE filed 03/29/05.
2. Claims 1, 12, 17, 21 and 23 were amended.
3. Claims 18 and 22 are canceled.
4. Claims 1-17, 19-21 and 23 are pending in this Office Action.

Response to Amendment

5. The objection to claim 21 is withdrawn.

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on 03/29/05 has been considered. The examiner was able to find corresponding English abstracts for the listed Foreign Patent literature. The abstracts are provided with this action. The "Communication from the European Patent Office dated August 11, 2001" had already been considered.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 1, 2, 4-9, 11-13, 15, 17, 19, 20, 21 and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,909,368 by Nixon et al. (Nixon) in view of U.S. Patent 5,878,257 by Nookala et al. (Nookala).

9. With respect to Claim 1, Nixon teaches Nixon teaches A control system (Col. 2 lines 8-10 and Col. 6 lines 45-58), comprising: an automation device operably connected to a network (Col. 7 lines 18-45); a network device operably connected to the network (Col. 7 lines 5-17); and, a customized application program for the automation device stored in the network device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. Col. 23 lines 46-55), wherein the customized application program controls the automation device (Col. 7 lines 18-25), wherein the customized application program is selected by the network device in response to a message received at the network device (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) and sent from the automation device (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628), as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4), and wherein the customized application program is downloaded to the automation device at a boot time of the automation device (Col. 28 lines 35-43 and Col. 27 line 66 - Col. 8 line 24). Nixon does not explicitly disclose the message being an application program request message. In a system for dynamically programming a programmable memory as part of a boot protocol, Nookala teaches an application program request message can be sent from the device requiring the programming. The data source with the application program can transmit the programming in response to the application program request message (Col. 2 line 66- Col. 3 line 3 and Col. 3 lines 43-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Nixon and modify it as indicated by Nookala such that the system further comprises wherein the

customized application program is selected by the network device in response to an application program request message received at the network device and sent from the automation device. One would be motivated to have this, as there is need for programming a programmable memory from a remote location (Col. 2 lines 1-3 of Nookala).

10. With respect to Claim 2, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the customized application program comprises an executive code and a user code (Col. 23 lines 5-17 and lines 34-43 and Col. 24 lines 4-26 of Nixon).

11. With respect to Claim 4, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the automation device is a programmable logic controller (Col. 7 lines 5-24 of Nixon).

12. With respect to Claim 5, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the network device is a server (Col. 7 lines 5-17 of Nixon).

13. With respect to Claim 6, Nixon in view of Nookala teaches all the limitations of Claim 5 and further teaches the server has a TCP/IP protocol stack (Col. 17 lines 15-21 and Col. 18 lines 30-40 of Nixon).

14. With respect to Claim 7, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the network is Internet (Col. 3 lines 15-21 of Nookala)

15. With respect to Claim 8, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the network is Ethernet (Col. 6 lines 45-57 of Nixon).

16. With respect to Claim 9, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the network is Profibus (Col. 7 lines 25-34 of Nixon).

17. With respect to Claim 11, Nixon in view of Nookala teaches all the limitations of Claim 1 and further teaches the network is Modbus+ (Col. 16 lines 39-48 of Nixon).

18. With respect to Claim 12, Nixon teaches a method of operating a control system on a network (Col. 2 lines 8-10 and Col. 6 lines 45-58) comprising the steps of: providing a network device for storing a customized application program to be executed on an automation device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. Col. 23 lines 46-55); transmitting a message for requesting a network address for the automation device by the automation device (Col. 28 lines 15-24); transmitting a message by the automation device (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4); selecting the customized application program in response to the message (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628); transmitting the customized application program to the automation device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628); and installing the customized application program on the automation device (Col. 28 lines 35-43 and See Fig. 17 steps 1624-1628) at a boot time of the automation device (Col. 27 line 66 - Col. 8 line 4). Nixon does not explicitly disclose the message being transmitted for requesting the application program. In a system for dynamically programming a programmable memory as part of a boot protocol, Nookala teaches an application program request message can be sent from the device requiring the programming. The data source with the application program can transmit the programming in response to the application program request message (Col. 2 line 66- Col. 3 line 3 and Col. 3 lines 43-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Nixon and modify it as indicated by Nookala such that the system further comprises transmitting a message by the automation device for requesting the customized application program for the automation device as part of a bootstrap protocol; selecting the customized application program in response to the

message for requesting the customized application program. One would be motivated to have this, as there is need for programming a programmable memory from a remote location (Col. 2 lines 1-3 of Nookala).

19. With respect to Claim 13, Nixon in view of Nookala teaches all the limitations of Claim 12 and further teaches the step of executing the customized application program on the automation device (Col. 7 lines 18-24 of Nixon).

20. With respect to Claim 15, Nixon in view of Nookala teaches all the limitations of Claim 12 and further teaches wherein the customized application program further comprises: an executive program code for the automation device (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26 of Nixon); and, a user program code for the automation device (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26 of Nixon), the user program is selected in response to the message requesting the customized application program (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628 of Nixon).

21. With respect to Claim 17, Nixon teaches a network control system (Col. 2 lines 8-10 and Col. 6 lines 45-58), comprising: means for operably connecting a network device to the network control system (Col. 7 lines 8-17), the network device stores a customized application program for controlling an automation device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. 23 lines 46-55); means for transmitting a message requesting a network address by the automation device (Col. 28 lines 15-24); means for transmitting a message by the automation device (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4); means for selecting the customized application program in response to the message (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628); means for transmitting the a customized application program to the automation

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device; and, means for installing the customized application program (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) at a boot time of the automation device (Col. 27 line 66 - Col. 8 line 4). Nixon does not explicitly disclose the message being transmitted for requesting the application program. In a system for dynamically programming a programmable memory as part of a boot protocol, Nookala teaches an application program request message can be sent from the device requiring the programming. The data source with the application program can transmit the programming in response to the application program request message (Col. 2 line 66- Col. 3 line 3 and Col. 3 lines 43-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Nixon and modify it as indicated by Nookala such that the system further comprises means for transmitting a message by the automation device for requesting the customized application program for the automation device as par of a bootstrap protocol; means for selecting the customized application program in response to the message for requesting the customized application program. One would be motivated to have this, as there is need for programming a programmable memory from a remote location (Col. 2 lines 1-3 of Nookala).

22. With respect to Claim 19, Nixon in view of Nookala teaches all the limitations of Claim 17 and further teaches the automation device is a controller (Col. 7 lines 5-24 of Nixon).

23. With respect to Claim 20, Nixon in view of Nookala teaches all the limitations of Claim 17 and further teaches the network device is a server (Col. 7 lines 5-17 of Nixon).

24. With respect to Claim 21, Nixon teaches a method of operating a control system on a network (Col. 2 lines 8-10 and Col. 6 lines 45-58) comprising the steps of: providing a

network device for storing a customized application program to be executed on an automation device (Col. 5 lines 17-21 and Col. 7 lines 8-17 and Col. Col. 23 lines 46-55); requesting a network address for the automation device by the automation device (Col. 28 lines 15-24); requesting the customized application program (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) as part of a bootstrap protocol (Col. 27 line 66 - Col. 8 line 4); selecting the customized application program (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628); transmitting the customized application program to the automation device (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628); and, installing the customized application program on the automation device (Col. 28 lines 31-43 and See Fig. 17 steps 1624-1628) at a time of the automation device (Col. 27 line 66 - Col. 8 line 4). Nixon does not explicitly disclose the requesting of the customized application program is specifically by the automation device. In a system for dynamically programming a programmable memory as part of a boot protocol, Nookala teaches a device requiring programming can explicitly request an application program through a request message sent from that device. The data source with the application program can transmit the programming in response to this request message from the device (Col. 2 line 66- Col. 3 line 3 and Col. 3 lines 43-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Nixon and modify it as indicated by Nookala such that the system further comprises requesting the customized application program by the automation device as part of the bootstrap protocol. One would be motivated to have this, as there is need for programming a programmable memory from a remote location (Col. 2 lines 1-3 of Nookala).

25. With respect to Claim 23, Nixon in view of Nookala teaches all the limitations of Claim 21 and further teaches selecting a user code for the customized application program (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26 of Nixon); and selecting an executive code for the customized application program (Col. 23 lines 5-17 and lines 34-45 and Col. 24 lines 4-26 of Nixon).

26. Claims 3, 14 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon and Nookala as applied to claims 2, 12 and 15 above, and further in view of "A Customizable Library to support Software Synthesis for Embedded Applications and Micro-Kernel Systems" by Ditze (Ditze).

27. With respect to Claim 3, Nixon in view of Nookala teaches all the limitations of Claim 2 but does not explicitly disclose the executive code is selected in response to the user code selected. Ditze teaches the executive code can be selected based on the user code (Page 90, section 3.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Nixon in view of Nookala and modify it as indicated by Ditze such that the system further comprises the executive code is selected in response to the user code selected. One would be motivated to have to this as it would optimize the application program by helping to eliminate run-time and memory overhead (Page 90, section 3.2 first paragraph of Dizte).

28. With respect to Claim 14, Nixon in view of Nookala teaches all the limitations of Claim 12 and further teaches the step of selecting the customized application program in response to the request for the customized application program comprises the steps of: identifying the message for requesting the customized application program (Col. 28 lines

31-44 and See Fig. 17 steps 1624-1628); and selecting a user application program in response to the message requesting the application program (Col. 28 lines 31-44 and See Fig. 17 steps 1624-1628), but does not explicitly disclose selecting an executive program in response to the user application program selected. Ditze teaches the executive code can be selected based on the user code (Page 90, section 3.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Nixon in view of Nookala and modify it as indicated by Ditze such that the method further comprises selecting an executive program in response to the user application program selected. One would be motivated to have to this as it would optimize the application program by helping to eliminate run-time and memory overhead (Page 90, section 3.2 first paragraph of Ditze).

29. With respect to Claim 16, Nixon in view of Nookala teaches all the limitations of Claim 15 but does not teach the executive code is customized in response to the message requesting the application program. Ditze teaches the executive program code is customized to meet the minimum requirements for executing the application program (Page 90, section 3.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Nixon in view of Nookala and modify it as indicated by Ditze such that the executive program code is customized in response to the message requesting the application program to meet the minimum requirements for executing the application program. One would be motivated to have to this as it would optimize the application program by helping to eliminate run-time and memory overhead (Page 90, section 3.2 first paragraph of Ditze).

30. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon in view of Nookala and in further view of U.S. Patent 6,788,980 by Johnson (Johnson).

31. With respect to Claim 10, Nixon in view of Nookala teaches all the limitations of Claim 1. Nixon in view of Nookala teaches that any network can be used in relation to the field devices (Col. 6 lines 45-49 of Nookala) but does not explicitly disclose the network using ControlNet. However, Johnson teaches that ControlNet is a well known protocol in relation to field devices (Col. 2 lines 15-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify system as disclosed by Nixon in view of Nookala such that the network is ControlNet. ControlNet offers multiple controllers controlling I/O on the same link. One would be motivated to have this since ControlNet is a well known protocol typically used in a field device environment (Col. 2 lines 15-27 of Johnson).

Response to Arguments

32. Applicant's arguments with respect to claims 1, 2, 4-11, 12, 13, 15, 17, 19, 20, 21 and 23 have been considered but are moot in view of the new ground(s) of rejection. The examiner will respond to arguments that are still pertinent to the examiner's interpretation of Nixon as well as the claim language of the instant application.

33. Applicant argues (page 7 of remarks) - *"In contrast to the system of claim 1, the control program of Nixon is not selected in response to an application program request message received from the automation device. Instead, the control program of Nixon is generated in response to user input commands." (See e.g., Nixon, col. 7, lines 8-13, e.g. Main PC 2 is configured to generate, in response to user input commands, various control routines that are provided via the ACN 3 to one or more local controllers identified as elements 4 and 5 which implement the control strategy defined by the control routines*

selected and established in main PC 2"). It is the user, through a workstation, not the controller itself (i.e., automation device) that requests a particular control routine to be downloaded to the controller."

a. The cited section of Col. 7, lines 8-13, merely discloses the generation of the actual application program such that it can be created. The program is obviously created by user input as it is a customized program. The cited section of Nixon in regards to the bootstrap protocol functionality (those from Col. 27 line 66 - Col. 28 line 43 describing Fig. 17) makes use of the generated program at a boot time. Particularly, Col. 27, lines 31-34, discloses the automation device generating a message that is sent after being assigned a network address. In response to this message (based on the flow of Fig. 17 from steps 1624-1628), there is some user input, but there is also the downloading of the automation programming (Col. 27 lines 35-43). This section does not state the downloading of the automation programming is based on a user request, just that there is user input in addition to downloading of the automation programming. The claim language itself does not necessarily exclude user input in response to the application program request message. Furthermore, each independent claim includes the transitional phrase "comprising" which is "open-ended and does not exclude additional, unrecited elements or method steps." (MPEP 2111.03). Also, even considering that a user selects the program to be downloaded, this still occurs at the network device as required by the claims and is further responsive to a message from the automation device as required by the claims. The new grounds of rejection further show it is obvious that such a message could be a message explicitly requesting a application program.

34. Applicant argues (Page 8 or remarks) - *"The Examiner cites to col. 28, lines 35-43 and Figure 17 of Nixon for the quoted limitation of claim 1. However, the steps of Figure 17 and the description at col. 28 do not specify that the control routine is selected by the network device in response to an application program request message sent by the automation device. Instead, step 1628 of Nixon, which downloads software to a controller, is performed after step 1626 which requires user interaction. Moreover, because the downloading to the controller in Nixon is done after some user interaction, it is not clear whether this is occurring at "a boot time" as also required by claim 1."*

b. Again, as explained above, the claim language does not necessarily exclude user interaction. As to the clarity of whether this occurs at "a boot time", applicant's do not sufficiently explain how user interaction would necessarily mean the downloading is no longer occurring at a boot time. Furthermore, Fig. 17 of Nixon is explicitly described as a flow chart that illustrates "a method for bootstrap loading a control system throughout a network" (Col. 27 lines 66-67). Steps 1624-1628 all occur in Fig. 17. Therefore, the examiner does not see how these steps could not be considered as occurring at "a boot time".

35. In regards to claims 3, 14 and 16, Applicant additionally argues on pages 10 and 11 that a sufficient prima facie case has not been made. However, Applicant only provides conclusive statements of the lacking criteria and the supposed failures of the examiner in making the prima facie case. Applicant provides no factual evidence based on the actual rejections and cited references. For example, on page 10, applicant states *"Here, there is absolutely no incentive in the cited references to combine the references in the manner suggested by the Examiner. When the motivation to combine the teachings of the*

references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper", yet applicant provides no comment on the explicitly stated motivation given and cited in each of these rejections. For another example, on page 11, applicant states "*Examiner failed to meet this burden and simply concludes it would have been obvious to combine the references.*" The examiner did not simply conclude obviousness. The examiner provided factual evidence through cited references in establishing the prima facie case of obviousness, including sufficient motivation explicitly cited by the examiner. As such, applicant's arguments are not persuasive.


Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001 or John Follansbee at 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Lazaro
April 27, 2005


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